

CLAIMS

1. A toothbrush head for an electric toothbrush, said toothbrush head comprising:

- (a) a main body extending between a coupling interface and a tip;
- (b) a camshaft passing substantially through said main body, said camshaft being adapted for connection to a motor to rotate said shaft, said camshaft having a first section proximate said coupling interface, said first section defining a longitudinal axis;
- (c) a first bristle head rotatably mounted to said main body proximate said tip, said first bristle head being mounted to rotate about a rotational axis between a first rotational position and a second rotational position, said first bristle head having a plurality of bristles;
- (d) a second bristle head slidably mounted to said main body proximate said tip, said second bristle head being moveable between a first position proximate to said longitudinal axis and a second position spaced from said longitudinal axis, said second bristle head having a plurality of bristles;
- (e) wherein said first bristle head is drivable by rotation of said camshaft between said first rotational position and said second rotational position; and
- (f) wherein said second bristle head is drivable by rotation of said camshaft from said first position to said second position.

2. A toothbrush head as claimed in claim 1 further comprising a plurality of bristles fixedly mounted to said main body.

3. A toothbrush head as claimed in claim 1 wherein said first bristle head further comprises a first cam follower adapted for abutment by said camshaft to rotate said first bristle head from said first rotational position to said second rotational position.

4. A toothbrush head as claimed in claim 3 wherein said first bristle head further comprises a second cam follower adapted for abutment by said camshaft to rotate said first bristle head from said second rotational position to said first rotational position.

5. A toothbrush head as claimed in claim 4 wherein said rotation of said first bristle head from said first rotational position to said second rotational position is in a first rotational direction and wherein said rotation from said second rotational position to said first rotational position is in a second rotational direction, said second rotational direction being opposed to said first directional rotation.

6. A toothbrush head as claimed in claim 4 wherein said camshaft is adapted such that said abutment of said first cam follower occurs 180 degrees out of phase with said abutment of said second cam follower over a full rotation of said camshaft.

7. A toothbrush head as claimed in claim 4 wherein said camshaft is adapted to abut said first and second cam followers such that said first bristle head undergoes reciprocal rotation between said first and second rotational positions while said camshaft is fully rotated.

8. A toothbrush head as claimed in claim 1 wherein said second bristle head further comprises a base portion, said base portion having a slot adapted to receive a pulsating portion of said camshaft, said pulsating portion of said camshaft being non-collinear with said longitudinal axis, said slot being adapted to transmit movement in a vertical direction to said second bristle head, said vertical direction being generally parallel to said bristle and perpendicular to said longitudinal axis.

9. A toothbrush head as claimed in claim 1 wherein said first bristle head further comprises a base portion, said base portion having a slot adapted to receive an oscillating portion of said camshaft, said oscillating portion of said camshaft being non-collinear with said longitudinal axis, said slot being adapted to transmit rotational motion to said first bristle head about a central axis of said first bristle head.

10. An electric toothbrush having a power handle and a toothbrush head, said power handle having a motor, said toothbrush head comprising:

(a) a main body extending from said power handle and a tip;

- (b) a camshaft passing substantially through said main body, said camshaft being mounted for rotation to said motor, said camshaft having a first section proximate said motor, said first section defining a longitudinal axis;
- (c) a first bristle head rotatably mounted to said main body proximate said tip, said first bristle head being mounted to rotate about a rotational axis between a first rotational position and a second rotational position, said first bristle head having a plurality of bristles;
- (d) a second bristle head slidably mounted to said main body proximate said tip, said second bristle head being moveable between a first position proximate to said longitudinal axis and a second position spaced from said longitudinal axis, said second bristle head having a plurality of bristles;
- (e) wherein said first bristle head is drivable by rotation of said camshaft between said first rotational position and said second rotational position; and
- (f) wherein said second bristle head is drivable by rotation of said camshaft from said first position to said second position.

11. An electric toothbrush as claimed in claim 10 further comprising a plurality of bristles fixedly mounted to said main body.

12. An electric toothbrush as claimed in claim 10 wherein said first bristle head further comprises a first cam follower adapted for abutment by said camshaft to rotate said first bristle head from said first rotational position to said second rotational position.

13. An electric toothbrush as claimed in claim 12 wherein said first bristle head further comprises a second cam follower adapted for abutment by said camshaft to rotate said first bristle head from said second rotational position to said first rotational position.

14. An electric toothbrush as claimed in claim 13 wherein said rotation of said first bristle head is from said first rotational position to said second rotational position is in a first rotational direction and wherein said rotation from said second rotational position to said first rotational position is in a second rotational direction, said second rotational direction being opposed to said first directional rotation.

15. An electric toothbrush as claimed in claim 13 wherein said camshaft is adapted such that said abutment of said first cam follower occurs 180 degrees out of phase with said abutment of said second cam follower over a full rotation of said camshaft.

16. An electric toothbrush as claimed in claim 13 wherein said camshaft is adapted to abut said first and second cam followers such that said first bristle

head undergoes reciprocal rotation between said first and second rotational positions while said camshaft is fully rotated.

17. An electric toothbrush as claimed in claim 10 wherein said second bristle head further comprises a base portion, said base portion having a slot adapted to receive a pulsating portion of said camshaft, said pulsating portion of said camshaft being non-collinear with said longitudinal axis, said slot being adapted to transmit movement in a vertical direction to said second bristle head, said vertical direction being generally parallel to said bristle and perpendicular to said longitudinal axis.

18. An electric toothbrush as claimed in claim 10 wherein said first bristle head further comprises a base portion, said base portion having a slot adapted to receive an oscillating portion of said camshaft, said oscillating portion of said camshaft being non-collinear with said longitudinal axis, said slot being adapted to transmit rotational motion to said first bristle head about a central axis of said first bristle head.